

ABSTRACT OF THE DISCLOSURE

An apparatus and method for reducing a mode size of an optical beam with a dual taper waveguide device. In one embodiment, an apparatus according to embodiments of the present invention includes a buried tapered waveguide disposed in a semiconductor layer. The apparatus further includes a tapered rib waveguide disposed in the semiconductor layer proximate to the buried tapered waveguide. The tapered rib waveguide includes a rib portion adjoining a slab portion. The slab portion of the rib waveguide adjoins the buried tapered waveguide. An optical beam is directed into a larger end of the buried tapered waveguide and the tapered rib waveguide. The buried tapered waveguide is tapered to guide the optical beam therethrough into the slab portion of the rib waveguide.